



## RPL11 gene

ribosomal protein L11

### Normal Function

The *RPL11* gene provides instructions for making one of approximately 80 different ribosomal proteins, which are components of cellular structures called ribosomes. Ribosomes process the cell's genetic instructions to create proteins.

Each ribosome is made up of two parts (subunits) called the large and small subunits. The protein produced from the *RPL11* gene is among those found in the large subunit.

The specific functions of the *RPL11* protein and the other ribosomal proteins within these subunits are unclear. Some ribosomal proteins are involved in the assembly or stability of ribosomes. Others help carry out the ribosome's main function of building new proteins. Studies suggest that some ribosomal proteins may have other functions, such as participating in chemical signaling pathways within the cell, regulating cell division, and controlling the self-destruction of cells (apoptosis).

### Health Conditions Related to Genetic Changes

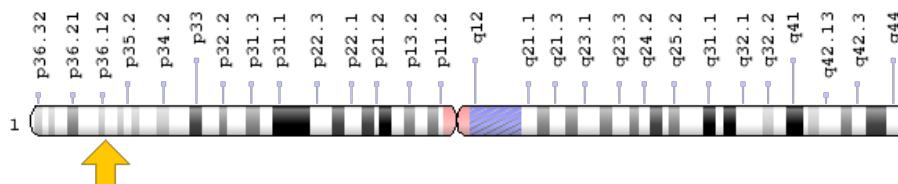
#### Diamond-Blackfan anemia

More than 25 *RPL11* gene mutations have been identified in individuals with Diamond-Blackfan anemia. These mutations are believed to affect the stability or function of the *RPL11* protein. Studies indicate that a shortage of functioning ribosomal proteins may increase the self-destruction of blood-forming cells in the bone marrow, resulting in a low number of red blood cells (anemia). Abnormal regulation of cell division or inappropriate triggering of apoptosis may contribute to the other health problems and unusual physical features that affect some people with Diamond-Blackfan anemia.

## Chromosomal Location

Cytogenetic Location: 1p36.11, which is the short (p) arm of chromosome 1 at position 36.11

Molecular Location: base pairs 23,691,779 to 23,696,425 on chromosome 1 (Homo sapiens Annotation Release 108, GRCh38.p7) (NCBI)



Credit: Genome Decoration Page/NCBI

## Other Names for This Gene

- 60S ribosomal protein L11
- cell growth-inhibiting protein 34
- CLL-associated antigen KW-12
- DBA7
- GIG34
- L11
- RL11\_HUMAN

## Additional Information & Resources

### Educational Resources

- Molecular Biology of the Cell (fourth edition, 2002): The RNA message is decoded on ribosomes  
<https://www.ncbi.nlm.nih.gov/books/NBK26829/#A1071>

### GeneReviews

- Diamond-Blackfan Anemia  
<https://www.ncbi.nlm.nih.gov/books/NBK7047>

## Scientific Articles on PubMed

- PubMed  
<https://www.ncbi.nlm.nih.gov/pubmed?term=%28%28RPL11%5BTIAB%5D%29+OR+%28ribosomal+protein+L11%5BTIAB%5D%29%29+AND+%28%28Genes%5BMH%5D%29+OR+%28Genetic+Phenomena%5BMH%5D%29%29+AND+english%5Bla%5D+AND+human%5Bmh%5D+AND+%22last+3600+days%22%5Bdp%5D>

## OMIM

- RIBOSOMAL PROTEIN L11  
<http://omim.org/entry/604175>

## Research Resources

- Atlas of Genetics and Cytogenetics in Oncology and Haematology  
[http://atlasgeneticsoncology.org/Genes/GC\\_RPL11.html](http://atlasgeneticsoncology.org/Genes/GC_RPL11.html)
- ClinVar  
<https://www.ncbi.nlm.nih.gov/clinvar?term=RPL11%5Bgene%5D>
- Diamond-Blackfan Anemia Mutation Database  
[http://www.dbgenes.unito.it/home.php?select\\_db=RPL11](http://www.dbgenes.unito.it/home.php?select_db=RPL11)
- HGNC Gene Family: L ribosomal proteins  
<http://www.genenames.org/cgi-bin/genefamilies/set/729>
- HGNC Gene Symbol Report  
[http://www.genenames.org/cgi-bin/gene\\_symbol\\_report?q=data/hgnc\\_data.php&hgnc\\_id=10301](http://www.genenames.org/cgi-bin/gene_symbol_report?q=data/hgnc_data.php&hgnc_id=10301)
- NCBI Gene  
<https://www.ncbi.nlm.nih.gov/gene/6135>
- UniProt  
<http://www.uniprot.org/uniprot/P62913>

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